

CLAIMS

What is claimed is:

- 1) A method for creating a real-time search engine over the Internet that provides a
5 search response containing data object descriptions and server descriptions of data
objects that are currently available for transfer from a provider server directly to a
recipient client in response to a recipient client search request, the method comprising:
 - a. the provider server connecting to a real-time search engine through the Internet,
the provider server providing the real-time search engine with data object
10 descriptions of data objects residing on the provider server, and
 - b. the real-time search engine indexing data object descriptions associated with the
data object of the provider server,
 - c. wherein the data object descriptions provided by the provider server are purged
from the real-time search engine when the provider server is disconnected from
15 the real-time search engine.
- 2) The method of claim 1 further comprising the provider server automatically, in real-
time, providing the real-time search engine with data object descriptions of data
objects that are added to the provider server.
- 3) The method of claim 1 further comprising the provider server automatically, in real-
20 time, notifying the real-time search engine of data objects that are removed from the
provider server, wherein the real-time search engine then purges the data object
descriptions.
- 4) The method of claim 1, wherein the data object descriptions comprise any of the
following: a title of the data object, the size of the data object, the type of data object,
25 any text associated with the data object, the creator of the data object, the quality
rating of the data object, and the provider server on which the data object resides.
- 5) The method of claim 1 wherein the server description comprises any of the following:
the server IP address, the number of simultaneous connections allowed by the server,

the server's reliability, and the server's name.

- 6) The method of claim 1 further comprising a client search command, wherein a recipient client searches the data object descriptions to find the best data object and selects the most optimal provider server that the data object resides on.
- 5 7) The method of claim 1 wherein the recipient client search request further comprises a provider server limitation criteria, wherein the search engine prunes the search response of all provider servers that do not meet the server limitation criteria.
- 8) The method of claim 7 wherein the provider server limitation criteria comprises a bandwidth limitation, wherein the search engine prunes the search response the
10 provider servers that have a bandwidth capability that is below the bandwidth limitation.
- 9) The method of claim 1 wherein the real-time search engine purges from the search response provider servers that cannot accept new recipient client download requests.
- 10) The method of claim 1 further comprising a client browser that automatically sorts
15 the search responses.
- 11) The method of claim 10 wherein the automated search response is sorted by the responsiveness value, wherein the responsiveness value is determined by measuring the amount of time an echo reply message takes to be returned by the provider server to the recipient client.
- 20 12) The method of claim 11 wherein the provider server is pruned from the search response if the provider server did not respond to the recipient client's echo request within a specified period of time.
- 13) The method of claim 1 wherein the data object is of the type selected from the group comprising: an audio data object, a text data object, a image data object, a video data
25 object, and a software executable data object.
- 14) The method of claim 1, further comprising the recipient selecting one of the provider servers in the search response, and then the recipient client downloading the data object from the selected provider server.

- 15) The method of claim 1, wherein the recipient client simultaneously operates as a provider server to other recipient clients, wherein data objects that have been downloaded by the recipient client are immediately made available to other recipient clients on the Internet.
- 5 16) The method of claim 1, wherein a provider server is automatically selected from among at least two provider servers that are able to supply a desired data object using a scoring mechanism.
- 10 17) The method of claim 16 wherein the scoring mechanism comprises the evaluation of round-trip response time from the recipient client to the provider server, the Internet connection line speed (data transfer speed) of the provider server, the size of the file, and the reliability of the provider server.
- 18) The method of claim 17 wherein the optimal score is from a provider server that has a high line speed and high server reliability.